Title: SYSTEM FOR FITTING WINDOW BLINDS TO A CONSERVATORY ROOF

Abstract: A conservatory roof has a system for attachment of window blinds built in for retrofitting of the window blinds. The attachment means will not be visible, so as not to affect the appearance of the conservatory roof when window blinds are not fitted. In particular mounting blocks (26) for supporting brackets (34) or support rails for window blinds will be installed during erection of a conservatory roof to be used when the window blinds are to be fitted.
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System for fitting window blinds to a conservatory roof

Description

This invention concerns a system for mounting blinds in a conservatory roof.

Window blinds for conservatory roofs are often fitted some time after the conservatory has been erected. Firstly, a surveyor has to visit the site and take measurements. Then the blinds have to be made to suit the particular roof in accordance with the surveyor's measurements. Finally, an installer has to fit the blinds in place. This means that the cost of fitting window blinds to a conservatory roof can be quite expensive relative to the cost of the roof itself.

In general the supplier of window blinds for a conservatory will not be the supplier of the roof, so that no provision is made in the roof construction for the fitting of window blinds. Therefore, the actual fitting of the blinds may not be as aesthetically pleasing as it could be.

An object of the invention is to provide a window blind fitting system for a conservatory roof that may overcome the above-mentioned problems.

According to the invention it is proposed that a conservatory roof will have means for attachment of window blinds built-in for retrofitting of the window blinds.

In other words key components for fitting of window blinds to a conservatory roof may be put in place as the roof is being built for use as and when window blinds are to be fitted.

The invention further provides components for attachment of window blinds to a conservatory roof, which components can be at least partially fitted to the roof during its erection for use when window blinds are fitted.
Preferably the means of attachment of the window blinds will not be visible, so as not to affect the appearance of the conservatory roof when window blinds are not fitted.

In preferred embodiments of the invention means for attachment of the rails of a window blind will be installed in the conservatory roof during construction of the roof. Preferably such means will comprise mounting blocks to which supporting brackets or support rails for window blind rails may be attached. The mounting blocks preferably have a slot or aperture to receive a tongue of a supporting bracket or associated with a support rail. The tongue and slot or aperture preferably have co-operating formations for retaining the tongue in the slot.

An additional support rail to which a blind rail may be attached may be required for additional strength. The additional rail may be attached to mounting blocks by means of slidable latch means at ends of the additional rail. The slidable latch means may be of a ratchet type to locate in a corresponding slot of a mounting block or may be a tongue that locates in a slot of a mounting block but has ratchet means co-operable with the additional rail. The latter is preferred for situations where glazing bars are not parallel. In that situation the mounting block preferably has a generally circular aperture for receiving the latch means and the latch means has a bullet-shaped head. Then different angles between glazing bars can be accommodated. It may be possible to provide window blind rails with latch means to attach directly to mounting blocks.

The mounting blocks are preferably shaped so as to be locatable on existing components of a conservatory roof system. It is proposed that the mounting blocks be locatable in grooves or slots of ridge and eaves components, which grooves or slots are used for attachment of glazing bars, such as for receiving heads of bolts used to secure glazing bars to the ridge or eaves. Where the mounting blocks may be visible from
below it is proposed that internal trim for the conservatory roof be shaped and sized so as to conceal the blocks until they are needed for actual fitting a window blinds.

It is further proposed that mounting blocks be connectable through glazing bars or attachments thereof. The mounting blocks may have interlocking formations that can be snapped or secured together through an opening in a glazing bar or attachment thereof, to provide mounting blocks on both sides of a glazing bar.

Some conservatory roofs include jack rafters, which extend between glazing bars and the eaves. Window blinds for glazing panels between jack rafters and glazing bars or triangular facets will require a top rail to be mounted at the jack rafter glazing bar junction. It is proposed that the mounting blocks be fixed close to where the bars meet.

Another aspect of the invention is to provide along glazing bars channels for edges of window blinds. Such channels are preferably provided by shelf components fitted to the underside of the glazing bars that with the underside of the glazing bars form a channel below each side of the glazing bar. Preferably the shelf components will comprise first and second components. The first component will preferably be installed during construction of the roof and the second component added when the blinds are being fitted. Until then it is proposed that a concealing component be provided to cover the first component and provide an aesthetically pleasing appearance to the underside of the glazing bars. The first component preferably provides plastics cladding for the glazing bar. Such cladding preferably has gasket material thereon for sealing between the cladding and glazing material supported on the glazing bar. In some circumstances it may be desirable to have a more rigid fixing base for the mounting blocks than provided by plastics components. To that end it is proposed that metal sections be incorporated between the first and second components. The metal section is preferably
slidably fitted to the first component and the second component is preferably a snap fit to the metal section. Mounting blocks in this arrangement will be secured to the metal section. Conveniently the channels will provide a suitable location for mounting blocks for jack rafter arrangements.

This invention will now be further described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 shows an arrangement at a conservatory roof ridge for fitting of a window blind;

Figure 2 is another view of the arrangement of Figure 1;

Figures 3A and 3B show an arrangement at a conservatory roof eaves for fitting a window blind;

Figure 4 is a further view of the arrangement of Figures 3A and 3B showing concealment of components of the window blind fitting arrangement;

Figure 5 shows a transom glazing bar of a window blind fitting system of the invention;

Figure 6 shows a hip glazing bar of a window blind fitting system of the invention;

Figure 7 shows a transom glazing bar with concealment of window blind system components;

Figure 8 shows an alternative transom glazing bar arrangement for the invention;

Figure 9 shows another glazing bar arrangement for the invention;

Figure 10 shows yet another glazing bar arrangement for the invention;

Figure 11 shows a further glazing bar arrangement for the invention;

Figures 12 and 13 show an alternative conservatory roof eaves beam
arrangement according to the invention;

Figures 14, 15 and 16 show a latching member for blind rail support rails; and

Figure 15 shows a mounting block for the support rail of Figure 14.

Window blind systems for conservatory roofs generally comprise a concertina folded blind slidable along strings extending between rails mounted to the ridge and eaves of the roof. Ends of the blind are attached to rails that are themselves slidable along the strings. Such an arrangement is conventional and so not illustrated herein.

Referring to Figures 1 and 2 of the accompanying drawings, a conservatory roof ridge 10 has wings 12 to which glazing bars 14 are mounted. The wings have longitudinal slots 16 for receiving heads of bolts (not shown) used to secure the glazing bars to the ridge. The glazing bars 14 are typically of inverted T-section having a stem 18 and cross bar 20. The cross bar 20 receives an undercladding component 22 bearing gasket material 24 for sealing against the underside of glazing panels shown) supported by the glazing bars. The glazing bars 14 are usually of aluminium and the undercladding of uPVC.

Mounting blocks 26 having T-section formations 28 are slid into position along the slots 16. The mounting blocks 26 have a slot 30 facing away from the ridge for receiving a tongue 32 of a support bracket 34 for a window blind rail (not shown). The tongue 32 and slot 30 have co-operating edges and sides in order to retain the tongue in the slot when pushed into the slot, such as, for example, co-operating ratchet formations. The support brackets are shaped and sized to be fixable to an aforementioned top rail of a window blind, such as by means of screws through one or more of the holes 36 in the bracket 34.

The positioning of the mounting blocks 26 is such that they are not visible from
below and they can be installed when the roof is being built and then used when it is desired to fix a window blind rail in place.

In Figures 3 and 4 of the accompanying drawings the arrangement at the eaves of a conservatory roof is shown. As can be seen the eaves of the roof includes an eaves beam 40 with an inverted T-section slot 42 in the head 44 thereof, which receives the heads of bolts for securing the lower ends of glazing bars and also plastics trim between glazing bars. This slot is used to receive slidably mounting blocks of the type described above. The mounting blocks at the eaves are concealed until needed by internal cladding 48 shaped and sized to accommodate the mounting blocks. In the same way as with the ridge, the mounting blocks receive support brackets for the bottom rail of a window blind.

It is to be noted that the internal cladding 48 has a flat bottom surface 49 of sufficient depth to accommodate thereunder a rail of a vertical window blind system for the windows of the conservatory. The rail of the vertical blind system may be affixed to the eaves using mounting blocks/brackets 26, 32.

In addition to the means for fixing the top and bottom rails of a window blind, it is proposed to provide tracks for the sides of window blinds and as shown in Figures 5 and 6 of the drawings this may be achieved by providing on the underside of glazing bars 14 components to form channel tracks below their cross bars 20. A first component 50 has a top part 52 in the form of a channel shaped and sized to fit over the glazing bar cross bar undercladding 22 and a pair of depending webs 54 providing a downwardly open slot, the sides of which have internally longitudinal ratchet teeth 55. The slot receives a second component 56, which is generally of inverted T-shape in section, having a stem 58 with its outer sides having ratchet teeth 59 longitudinally for mating with the teeth 55 of the first component to hold the components together. The
second component further has flanges 60 either side of the stem that with the underside of the undercladding of the glazing bar cross bar provide the channel tracks for the side edges of the window blinds. These tracks will help to control the sliding movement of the blinds as they are opened and closed but also eliminate light coming in at the edges of the blinds.

Figure 5 shows the configuration for a transom glazing bar and Figure 6 shows the configuration for a hip glazing bar. In both cases the first component may be fixed to the undercladding of the glazing bars in any suitable way, such as by adhesive, double-sided adhesive tape, screws or by a clipping arrangement (see Figure 8 described below).

The second component 56 is only really required when window blinds are fitted until then it is proposed that the first component 50 be installed when the roof is being fitted and that a concealing component 62 be put in place and only replaced when window blinds are being fitted. Figure 7 of the drawings shows the provision of such a concealing component, which fits to the first component in the same way as the second component, i.e. by means of stem 64 fitting between webs 54 but has an outer shape that gives an aesthetically pleasing shape to the underside of the glazing bars.

Figure 8 of the drawings shows an alternative way of fixing the second component 56 to the first component 50'. In this case the glazing bar undercladding 22' does not locate on the cross bar of the glazing bar by means of the gasket material held in place by glazing panels as in Figures 5 and 6 but has its free edges returned to provide longitudinal slots 68 to locate over the inwards facing edges of the glazing bar cross bar, the undercladding being slid into place on the glazing bar. Gasket material 70 is provided on top surfaces of the undercladding 22'. On its opposite outer sides, the undercladding 22'has upwardly open grooves 72, over which snap fit ribs 74 on the
inside surfaces of the first component to hold the component in place. The second component 56 is the same as shown in Figures 5 and 6 of the drawings.

Turning to Figure 9, a lower capping 80 for a glazing bar 82 slides onto the cross bar 84 of the glazing bar. The capping 80 has a base 86 that includes a recessed central part 88 including a channel part 90. The channel 90 has lips 92 along its side edges to provide snap-fit means for receiving a component 94 of I-section. The I-section component 94 has a bottom cross bar 96 having top and bottom faces 98, 100 connected by webs 102. The two faces 98, 100 are connected at each end by decorative ends 104. The central limb 106 of the I-section is twin-walled and has recessed end formations 108 to snap-fit onto the lips 92 of the channel of the capping.

The I-section 94 has extending from near its top end wings 110 that sit in the recessed central part 88 of the capping. The indented spaces on either side between the bottom cross bar of the I-section component and the capping/wings of the I-section are to receive the mounting blocks for window blind rails.

For some situations it may be desirable to increase the strength of the support for mounting blocks by incorporating a metal section between the glazing bar capping and the shelf component. Figure 10 shows the arrangement for a transom glazing bar and Figure 11 shows the arrangement for a Victorian glazing bar. In Figure 10 glazing bar capping 120 has ledges 122 on either side over which hook side components 124. The side components 124 have an intermediate part 126 that lies on the underside of the capping 120 and a rib 128 of the intermediate part 126 locates in a slot 130 in the underside of the capping. The side components 124 are connected by an aluminium extrusion 132 that has sides 134 that slide into slots 136 on the inside of each side component. The aluminium extrusion 132 provides facing internal ribs 138 providing a gap therebetween and an inverted T-section or shelf component 140 that is the same
as the I-section component 94 except for the absence of the wings 110 snap-fits onto the ribs 138 by means of the recessed end formations 108. Mounting blocks for the window blind rail connectors can be secured to the glazing bar in the recess formed between the underside of the capping and the T-bar of the shelf component through the aluminium component.

In Figure 11 of the drawings the glazing bar capping has the same side components 124 attached thereto as in Figure 10 but the angle between the sides of the cross bar of the glazing bar means that a different aluminium extrusion 150 has to be used to connect the side components. The aluminium extrusion has sides 152 that slidably locate in the slots 136 of the side components and the aluminium extrusion provide internal ribs 154 onto which a shelf component 140 snap-fits.

Referring to Figures 12 and 13 of the accompanying drawings, an alternative eaves beam arrangement is shown. Glazing bar 82 is as shown in Figure 9 and a mounting block for attachment of a window blind rail is shown at 160. To conceal the mounting block from below a decorative trim 162 is attached to the fascia 164 of the eaves beam 166 by means of injection moulded brackets 168. The brackets 168 are slid into position along a slot 170 of the fascia and provide a slot 172 having a ratchet face to co-operate with a web 174 extending from the rear of the trim and a resilient notched flap 176 to receive and locate a lip 178 along the leading edge of a top web 180 of the bracket.

The decorative trim has an, in use, vertical face 182 that can be provided in different depths according to the pitch of the roof in order to conceal the window blind fixings from below.

The mounting block 160 and the means of attaching a support rail for a window blind are shown in more detail in Figures 15 to 17. The support rail may be used
between parallel glazing bars and between non-parallel glazing bars, such as at the outer end of a Victorian or Edwardian style conservatory. The mounting block used in these two situations is different but the support rail is designed to incorporate a latch means that can be reversed for use with either of the mounting blocks. When the glazing bars are parallel a straightforward latching system is needed but to accommodate variations in angles between glazing bars in the Victorian or Edwardian styles of conservatory a different approach is needed.

In Figure 13 the addition of a support rail for a window blind rail is shown in a Victorian style conservatory roof. The support rail 190 has a generally central slot 192, in which a latch member 194 is slidable. The latch member 194 has one end as a pair of parallel legs 196 with serrated outer edges and the other end as a bullet shaped tongue 198. The support rail 190 has an end cap 200, through which the bullet-shaped end of the latch member extends to locate in mounting block 202 (see Figure 14) secured to the shelf component of the glazing bar by a screw or the like through hole 205 in base plate 207. The latch member and the end cap have ratchet formations 204 for holding the latch member at a desired extension from the end cap. The end 198 of the latch member locates in a circular aperture 204 of the mounting block. The shape of the latch member and the aperture of the mounting block allow for different angles between the glazing bar and the eaves beam in the horizontal plane.

It is possible to use the latch member the other way round, i.e. with the legs 196 extending from the end cap of the rail for location in a slit 210 of mounting block 160 (see also Figure 12), edges of the slit co-operating with the serrated edges of the legs to retain them at a desired extension from the end cap. This arrangement is shown in Figures 15 to 17. Similar arrangements may be used at the ridge of a conservatory roof.

In summary, the system illustrated allows components to be installed as a
The conservatory roof is being erected that will allow later fitting of window blinds without making significant alterations to the roof. In the meantime, the installed components can be concealed, so that there is no adverse effect on the aesthetic appearance of the roof from the inside. Furthermore, as the dimensions of the roof are known, it will not be necessary for a survey to be carried out in order to determine blind sizes. Thus, the cost of installing window blinds in a conservatory roof may be reduced.
1. A conservatory roof having means for attachment of window blinds built-in for retrofitting of the window blinds.

2. A conservatory roof as claimed in claim 1, wherein the means of attachment of the window blinds is visible, so as not to affect the appearance of the conservatory roof when window blinds are not fitted.

3. A conservatory roof as claimed in claim 2, wherein the attachment means comprises mounting blocks to which supporting brackets for window blind rails may be attached.

4. A conservatory roof as claimed in claim 2, wherein the attachment means comprises mounting blocks to which a support rail for a window blind may be attached.

5. A conservatory roof as claimed in claim 3 or 4, wherein the mounting blocks have a slot to receive a tongue of a supporting bracket.

6. A conservatory roof as claimed in claim 5, wherein the tongue and slot have cooperating formations for retaining the tongue in the slot.

7. A conservatory roof as claimed in any one of claims 3 to 6, wherein the mounting blocks are shaped so as to be locatable on existing components of a conservatory roof system.

8. A conservatory roof as claimed in claim 7, wherein the mounting blocks are locatable in grooves or slots of ridge and eaves components of the roof.

9. A conservatory roof as claimed in claim 8, wherein the grooves or slots are used for attachment of glazing bars.

10. A conservatory roof as claimed in claim 9, wherein said grooves or slots normally receive heads of bolts used to secure glazing bars to the ridge or eaves.
11. A conservatory roof as claimed in any one of claims 3 to 10, wherein where the mounting blocks are otherwise visible from below internal trim is provided shaped and sized so as to conceal the blocks until they are needed for actual fitting a window blinds.

12. A conservatory roof as claimed in any one of claims 1 to 11, wherein glazing bars are provided with channels for edges of window blinds.

13. A conservatory roof as claimed in claim 12, wherein the channels are provided by shelf components fitted to the underside of the glazing bars that with the underside of the glazing bars form a channel below each side of the glazing bar.

14. A conservatory roof as claimed in claim 13, wherein the shelf components comprise first and second components.

15. A conservatory roof as claimed in claim 14, wherein the shelf components include a reinforcing component.

16. A conservatory roof as claimed in claim 14 or 15, wherein the first component is installed during construction of the roof and the second component added when the blinds are being fitted.

17. A conservatory roof as claimed in claim 14, wherein a concealing component is provided to cover the first component and provide an aesthetically pleasing appearance to the underside of the glazing bars until a window blind is fitted.

18. A conservatory roof as claimed in any one of claims 14 to 17, wherein the first component has a top part in the form of a channel, shaped and sized to fit over glazing bar cross bar undercladding and a pair of depending webs to provide a location for attachment of the second component.

19. A conservatory roof as claimed in claim 18, wherein the depending webs provide a downwardly open slot, the sides of which have internally longitudinal ratchet teeth.

20. A conservatory roof as claimed in claim 19, wherein the second component is
generally of inverted T-shape in section, having a stem with its outer sides having ratchet teeth longitudinally for mating with the teeth of the first component to hold the components together.

21. A conservatory roof as claimed in claim 20, wherein the second component further has flanges either side of the stem that with the underside of the undercladding of a glazing bar cross bar provide channel tracks for the side edges of a window blind.

22. A conservatory roof substantially as hereinbefore described with reference to and as illustrated in any of the accompanying drawings.

23. Attachment means for a rail of a window blind system comprising a mounting block for attachment to a conservatory roof component and a supporting bracket or support rail for the window blind rail.

24. Attachment means as claimed in claim 23, wherein the mounting block has a slot to receive a tongue of the supporting bracket or a tongue extending from a support rail.

25. Attachment means roof as claimed in claim 24, wherein the tongue and slot have co-operating formations for retaining the tongue in the slot.

26. Attachment means as claimed in claim 23, 24 or 25, wherein the mounting blocks are shaped so as to be locatable on existing components of a conservatory roof system.

27. Attachment means as claimed in claim 26, wherein the mounting blocks are locatable in grooves or slots of ridge and eaves components of the roof.

28. Attachment means as claimed in claim 27, wherein the grooves or slots are used for attachment of glazing bars.

29. Attachment means as claimed in claim 28, wherein said grooves or slots normally receive heads of bolts used to secure glazing bars to the ridge or eaves.

30. Attachment means for a window blind rail substantially as hereinbefore
described with reference to and as illustrated in any of the accompanying drawings.

31. Means for providing a glazing bar with a channel for an edge of a window blind comprising a shelf component fitted to the underside of the glazing bar that with the underside of the glazing bar forms a channel below each side of the glazing bar.

32. Means as claimed in claim 31, wherein the shelf component comprises first and second components.

33. Means as claimed in claim 32, wherein the first component is installed during construction of the roof and the second component added when the blinds are being fitted.

34. Means as claimed in claim 33, wherein a concealing component is provided to cover the first component and provide an aesthetically pleasing appearance to the underside of the glazing bars until a window blind is fitted.

35. Means as claimed in claim 32, 33 or 34, wherein the first component has a top part in the form of a channel, shaped and sized to fit over glazing bar cross bar undercladding and a pair of depending webs to provide a location for attachment of the second component.

36. Means as claimed in claim 35, wherein the depending webs provide a downwardly open slot, the sides of which have internally longitudinal ratchet teeth.

37. Means as claimed in claim 36, wherein the second component is generally of inverted T-shape in section, having a stem with its outer sides having ratchet teeth longitudinally for mating with the teeth of the first component to hold the components together.

38. Means as claimed in claim 37, wherein the second component further has flanges either side of the stem that with the underside of the undercladding of a glazing bar cross bar provide channel tracks for the side edges of a window blind.
39. Means for providing a glazing bar with a channel for an edge of a window blind substantially as hereinbefore described with reference to and as illustrated in any of the accompanying drawings.